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Monday, March 23, 2009

To Whom It May Concern:

I am writing as the Principal Investigator for SciDAC's Global Cloud Resolving Model (GCRM) project. In this role, I am responsible for developing an innovative and very high-resolution global atmospheric model.

The purpose of this letter is to express strong support for the SciDAC Visualization and Analytics Center for Enabling Technology in their upcoming program review. In support of my SciDAC-funded science effort, the team has provided invaluable help and my team has made progress towards petascale science by implementing a visualization and analysis strategy for the massive datasets generated by our GCRM code.

Through a productive collaborative effort with Ross Heikes (key GCRM developer at CSU) and Karen Schuhardt (PNNL), the VACET Center has had a positive impact on our (science) project. These accomplishments include:

- Development and testing of a data model for the geodesic grid and its associated variables;
- Implementation of a VisIt plugin for the model output data on the geodesic grid.

Our in-house tools are simply incapable of handling the large data volumes generated by our GCRM simulations. Thanks to the parallel capabilities and rich feature set of VisIt, we are now in a position to visualize and analyze our data and gain valuable insights.

Our group has also received support from VACET and NERSC personnel in troubleshooting and profiling large scale GCRM runs on franklin. As we ramp up our software development efforts, this effort will be extremely useful when we do 80 K+ core runs on DOE's leadership class facilities at Oak Ridge.

In summary, VACET has had a positive impact on our science effort, and is providing a valuable service to the scientific community.

Sincerely,

David A. Randall  
Professor and SciDAC PI